



(B I J E L A T A B I J A)

The White Fortress

PROGRAM OF STRUCTURAL REPAIRS, PRESERVATION,
RESTORATION AND REVITALIZATION



INSTITUTE FOR THE PROTECTION OF
CULTURAL-HISTORICAL AND NATURAL
HERITAGE OF CANTON SARAJEVO

THE PROGRAM OF STRUCTURAL REPAIRS, CONSERVATION, RESTORATION AND
REVITALIZATION OF BIJELA TABIJA

INVESTOR: Canton of Sarajevo
Ministry of Area Planning
Ministry of Culture and Sport

PREPARATOR OF THE PROJECT:
The Institute for the Protection of
Cultural-Historical and Natural
Heritage of Canton Sarajevo

STAGE OF THE PROJECT:
The Program of Structural Repairs,
Conservation, Restoration and
Revitalization of Bijela Tabija

The Project Task for making The Project
of Structural Repairs, Conservation,
Restoration and Revitalization of Bijela Tabija

SUPERVISION: Conception

WORKING TEAM:
Valida Celic-Cemerlic, Bsc. arch.
Vesna Asceric - Museta, PhD, historian

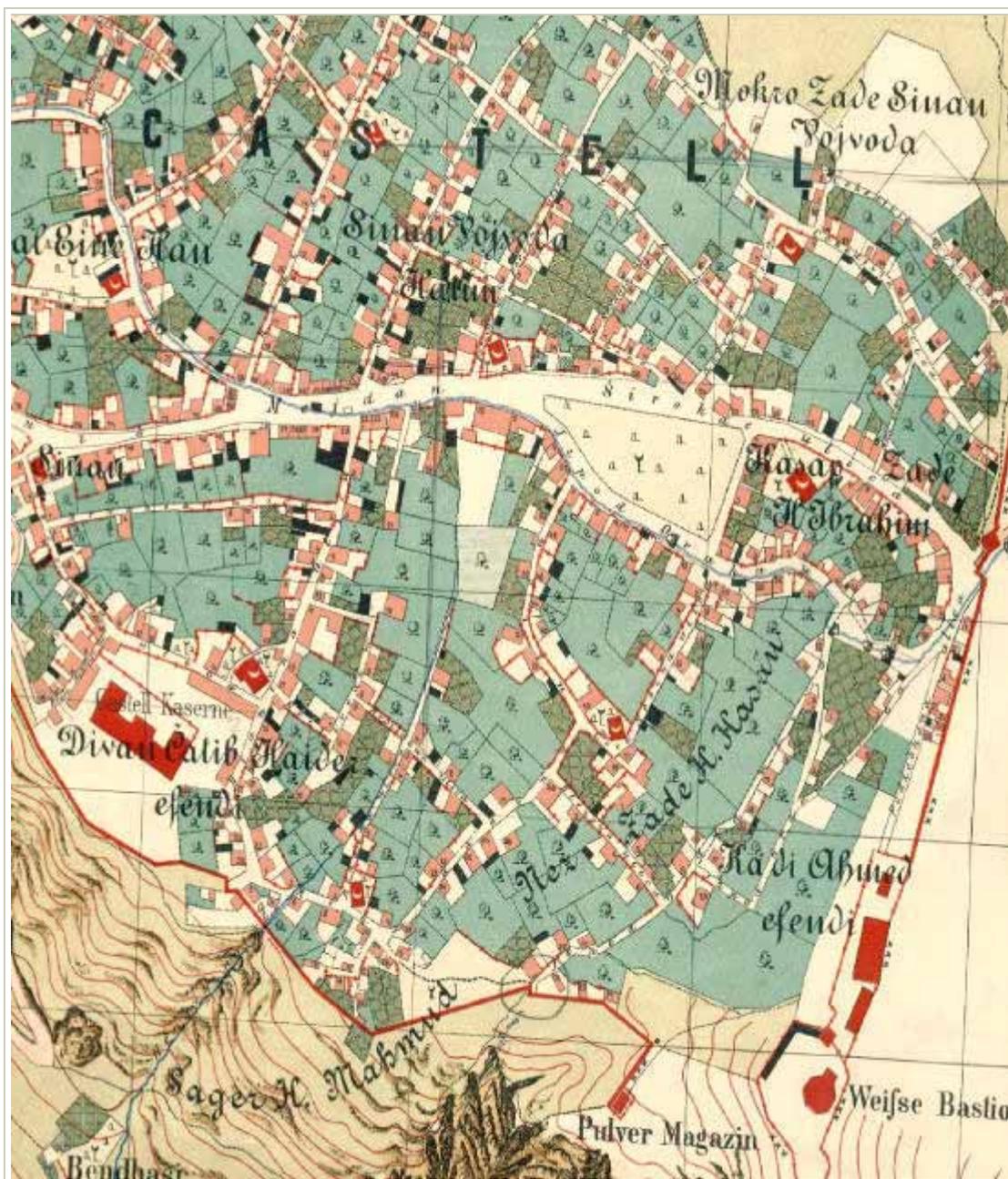
DESIGN ENGINEERS: Nermina Mujezinovic, Bsc.Arch i Amira Arnautovic, Bsc.Arch.

Introduction

Situated on the South-East side of Sarajevo, and hiding beneath its stone cloak the history of the City from the Middle Ages until today, Bijela Tabija is certainly one of the most impressive and most valuable buildings of the architectural heritage of this area.

The dominating position of Bijela Tabija with respect to the natural amphitheatre of the historical heart of the City, as well as the view stretching along the river Miljacka all the way to the modern residential areas in the West of Sarajevo, make up a peculiar, almost completely natural choreography of nature and human creativity.

With the aim of returning Bijela Tabija into our every-day life we chose to offer this building to the cultural scene, to make it a stage not only of history, but also of today's modern living.



VRATNIK RAMPARTS WITH WHITE BASTION (BIJELA TABIJA)

1. HISTORICAL OVERVIEW

1.1 Bijela tabija (White bastion) as a part of the Vratnik City

The Vratnik City with its walls, forts (tabijas), gates (kapijas) and towers (kapi - kulas) gives a specific shape and a personal stamp to the heart of old Sarajevo. It is legally protected by Decree No. 381/71 made on the 17 June 1971 by the City Institute for the Protection of the Monuments of Sarajevo. It was included in the Register of Protected Monuments on the basis of Decree No 4006/71 made on the 9 September 1971 by the 1st Municipality Court in Sarajevo.

The building of the Vratnik City started in 1729 and was completed in 1739. The need for its construction had been felt considerably earlier than that; more precisely after Prince Eugene of Savoy's attack on Sarajevo in 1697 when certain weaknesses in the city's defence system had been detected. The then Bosnian governor Ahmed-Pasha Rustempasic Skopljak started its construction by extending the already-existing Sarajevo fortress and by building the wall. The wall was supposed to encompass about 450 houses as well as an empty space sufficient to build the same number of new ones. The work was supervised by his son Rustem-Pasha.

However, the following year Ahmed-Pasha was transferred from Bosnia and the building stopped. It was only in 1739 that Hecim-oglu Alipasa resumed the building of the Vratnik City. The city wall surrounds an area of 495,596 m². Within the wall five forts (Bijela, Zuta, Strosicka, Arap and Arnaut tabijas), three towers (Visegrad, Ploca and Sirokac kapi-kulas), five bigger and several smaller gates were erected. There was one dungeon there to start off with and another one was made when the city was extended.

The Vratnik City was still in the same shape when 1878 came. The Austrian authorities erected, within the city wall, a modern barracks, popularly known as Jajce Barracks.

2. BIJELA TABIJA (WHITE BASTION) AS AN ARCHITECTURAL HERITAGE BUILDING

Bijela Tabija is a protruding part of the wall of the old Vratnik City, and dominates the Eastern, the natural entrance to the City. It is built of stone. Inside of it there used to be a gun-crew and an ammunition storage. In its thick walls there are openings for the canons.

As far as the time of the building of Bijela Tabija is concerned, various opinions have been put forward. According to one of them, it was made around 1550 (this opinion is founded on the information given by the traveller Katarino Zeno), and was destroyed at the time of the building of the Vratnik City when a new fort was erected in its place.

According to another opinion, even in the Middle Ages in the place of Bijela Tabija there was a fortress, which was not bigger than the usual medieval defence fortresses protecting an open settlement in its vicinity. Since it is known that in the Middle Ages on the site of today's Sarajevo there was a settlement (trg) Tornik situated at the confluence of the rivers Koseva and Miljacka, then it is certain that the settlement must have had a fort which protected it. Bijela Tabija's location from which there is a view onto the whole of the Sarajevo field is ideal for situating a mediaeval fortress. That was a fortress with a rectangular base, with four square-based towers at each of its corners and a fifth above the entrance gate. This shape classifies it as a building from the late 14th or early 15th century, which is precisely the time when the medieval settlement on the site of today's Sarajevo is first mentioned in written documents.

3. SURVEY OF PRESENT CONDITION OF OBJECT

The Complex-Bijela Tabija is now the most devastated area with seriously devastated internal objects.

Before the war devastations inside Complex Bijela Tabija were the result of bad maintenance causing the decaying and ruining of Object's parts. Then came the human factor, taking off the constructive material (stone) and illegal housing in the contact zone of Complex caused the demolition of ramparts and surrounding area.

During the war and for several years Complex was exposed to direct shelling of heavy weapons. Consequences of war activities and inadequate use of the area and objects of Complex after the war were final acts of its devastation.

Present condition of objects inside the Complex Bijela Tabija can be described as critical.

4. FUTURE PURPOSE AND USE OF BIJELA TABIJA

Long - term perceiving of Complex Bijela Tabija is needed in the context of totality of Vratnik Ramparts, primarily its segment put under legal protection as the object of cultural and historical heritage listed in the Protected Monuments Register by Act of Municipal Court in Sarajevo Num. 4006/71 on September 09, 1971.

Directing the project of Structural Repairs, Preservation, Restoration and Revitalization of Bijela Tabija to active use of this area in the sense of designing not only the permanent point of city cultural scene but also the total tourist offer, opens a large number of developing possibilities of multifunctional use ranking from open scene for various kinds of expressions to closed exhibit halls and hotel and tourist businesses.

Placing the Object Bijela Tabija in the process of active use, counting also present condition of Vratnik Rampart, could be a good basis for continuation on integration of the entire space of Vratnik Rampart, i.e. bringing to its final purpose. To that aim the next stage of activities would be:

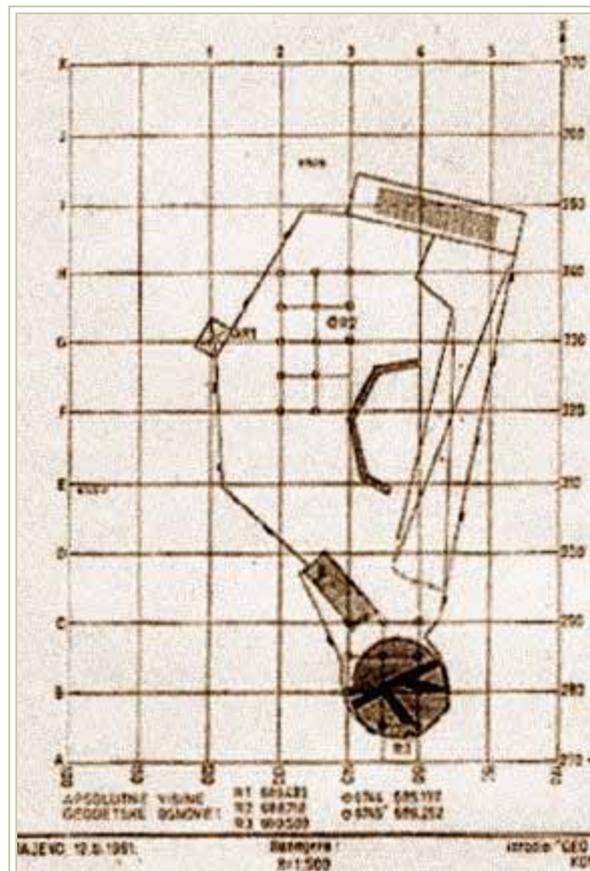
- ◆ total stabilization and reconstruction of Vratnik Rampart as the physical architectonic building structure
- ◆ bringing to purpose some objects with regard to their commercialization
- ◆ the contact zone, i.e. the dense building structure of individual housing objects adapt (subordinate) to active tourist purpose and function of Rampart
- ◆ enable to close in the shaping of the large space with the area of recreation center Bentbasa - the area of protected natural environment
- ◆ in accordance with Regulation Plan of Vratnik emphasize the realization of the Plan relative to the specific Bosnian habitat which would be directed by stimulation measures to the building of individual boarding houses with 3 or 4 room-and-board capacity

You can conclude that the Project of Stabilization, Preservation, Restoration and Revitalization of Bijela tabija aims in the first place to put the Object in active function, only after carried out works of stabilization (structural repairs) and revitalization on individual objects of Vratnik Rampart, the treatment of the whole area as the center of tourist activities in the field of protection and use of cultural-historical heritage, understands a series of parallel activities in substantially larger space as well.



A. Bejti), Srednjovjekovni grad Hodidjed bio je na Vratniku u Sarajevu, ANU BiH, Radovi LXIV, Odj.dru{.nauka knj.20, Sarajevo 1979, str.120.

MEDIEVAL FORTRESS



ARCHEOLOGICAL EXCAVATIONS FROM THE 1991

1. DOCUMENTARY HISTORICAL AND CULTURAL VALORIZATION OF OBJECT

1.1 Former archaeological excavations (investigations) - findings

It was investigated by sondage archaeological excavations about 250 m² surface inside the very massive tower and the courtyard of a fortress part during 1991 year investigated it. The work was made according to the system of precise digging layers in order to get all soil profiles where could not be noticed symmetrical stratigraphic and chronological dynamics. There were some deviations from existing square network in order to discover as many as possible walls under the humus (0.30 m). Walls (marked on the plan from I to IV) stretching in different directions are in mutual connection closing a bigger semicircular space and three smaller ones in a considerable unusual form.

The biggest depth reached in a part of the square I is 4,45 m (this excavation was stopped because of the problem in bringing the earth to the surface).

In the context of given result the discovered parts of architecture we can date them in Turkish period without precise determination of the building stages. In the long ottoman period there were a lot of demolishing, superstructurings, as it is known particularly in years 1659, 1771, 1777, 1785, 1797, 1889.

There were discovered Turkish ceramics, fragments of pottery, animal bones and numerous iron tools (nails, wedges, bolts ...) what indicates a large use of timber.

In the court of Fortress were opened two pits. In the first one located next to the Fortress was found a great number of projectiles, mainly cannonballs and shells. It was probably an exploded magazine because a great part of projectiles was fused in an amorphous mass.

In the second one was discovered a part of Mosque`s wall and nearby a second object. Discovered parts indicate the polygonal form of Mosque. Between these two objects was a canal covered with stone plates. It was probably an old watersupplying canal from the stream (brook) Moscanica founded in Vratnik by Skender-pasa in XV century and reopened in 1777 year.

The works on the Mosque had not given significant results nor answered to many questions. To that aim are planned investigations (archaeological excavations) of all free parts of Fortress with obligatory remedial measures of the most damaged parts.

2. VALORIZATION OF HISTORICAL LAYERS

2.1. The middle ages

Former investigations and findings of sondage archaeological excavations (exploratory borings) certainly point to existing remnants of medieval bedding (layer) - medieval fortress in area of Bijela Tabija, while it is certain that in the larger space can be expected findings of the medieval city Vratnik. Unfortunately there have not been carried out systematic archaeological investigations neither inside the Object nor at external space until now. Respecting the historical disposition of the supposed medieval settlement in the context of later appeared and today entirely visible proofs, that is of the whole Object Bijela Tabija, it is indisputable that in the process of valorization of historical layers priority should be given to the period of Middle Ages.

2.2. Ottoman period

It is certain that Bijela Tabija in the known form to us has origin in Ottoman period, more exactly at the beginning of XVIII century. Original construction of Object with all the characteristic elements of building is easily recognized and on the very Object is not controversial.

As the original construction, form, style and functional characteristics of this object present, in the sense of material elements, the most representative and most visible historical layer of object, this period is treated as the primary architectural-constructive and artistic basis of stabilization, preservation, restoration and revitalization of the whole object, that is of the Complex Bijela Tabija in its bringing to the planned purpose.

The object at the entrance of Complex Bijela Tabija which by its artistic elements associates with the military barracks, according to applied materials and the kind of building construction is similar to the way of building, but there are not any adequate details noticed for the reliable assertion of its historic belonging to this period or to any later one.

2.3. Austro-Hungarian Period

It is obvious that Bijela Tabija meets with Austro-Hungarian period as already devastated object. Afterwards it is stabilized at external parts of construction and completed in interior. Stone - the previous material is used with the use of new materials - iron and concrete. In these interventions are applied the processed stone blocks and characteristic stone decoration. The concrete plates are put on strong iron profiles. Purpose of the Object in this period continue to be military fortification.

3. DIRECTIVES FOR MAKING THE PROJECT OF STRUCTURAL REPAIRS, PRESERVATION, RESTORATION AND REVITALIZATION OF BIJELA TABIJA FROM THE ASPECT OF DOCUMENTARY, HISTORICAL AND CULTURAL VALORIZATION OF OBJECT

Project of Structural Repairs, Preservation, Restoration and Revitalization of Bijela Tabija from the aspect of documentary, historical and cultural valorization of object should be treated as follows:

- ◆ In Stage I of making documentation for stabilization, preservation, restoration and revitalization of Object it is necessary to foresee that just after the phase of cleaning of Object come the phase of sondage archaeological excavations inside the Fortresse.
The sondage archaeological excavations would have for aim to provide for proofs of the value of medieval field inside the area of Bijela Tabija. On the basis of carried out valorization it is necessary to make the Program of Systematic Archaeological Excavations that would except for the area of Bijela Tabija recognize all the area of Vratnik Rampart and inside it City of Vratnik. Program would be define in several stages and localities, regarding the time and space.
- ◆ Elements of Vratnik Rampart inside the Complex of Bijela Tabija and in direct contact with Complex are to be treated as elements of total reconstruction and entire building reaffirmation.
- ◆ All elements of Ottoman Period are to be treated as primary structure elements
- ◆ Elements of Austro-Hungarian, in accordance with the founded state visible differentiate in relation with elements of former historical period
- ◆ Adding rooms inside the object - built in stone and covered by concrete on iron bars are to be treated in some freer way without pretension for allout reconstruction
- ◆ The object of Barracks at the entrance of Complex Bijela Tabija is to be treated above all in accordance with the change of Complex purpose and fulfillment of planned needs and function of the Complex.



VIEW OF BIJELA TABIJA FROM THE SOUTH-WEST SLOPE

1. BIJELA TABIJA COMPLEX AS PART OF THE STRATEGY OF RENOVATION AND DEVELOPMENT

The Bijela tabija ("White bastion") complex forms, on the one hand, an enclosed spatial and functional whole of defined purpose, with dictated, primarily spatial limits, and on the other hand a spatial accent within the entire Vratnik town, or rather the Vratnik ramparts; or, to take a broader view, the outer zone of the historic heart of the city.

The spatial disposition of the Bijela tabija complex must be treated within the context of:

- ◆ the entire Vratnik ramparts
- ◆ the spatial unit of Vratnik
- ◆ the spatial unity of the historic heart of the city.

Considering the Bijela tabija complex within the Vratnik ramparts means establishing or reconstructing a single physical link between Bijela tabija and the existing part of the Vratnik ramparts. This inevitably involves confronting the problem of uncontrolled unauthorized construction, which leads directly to the destruction of the ramparts, or at best threatens their survival.

The establishment of the physical continuity of the Vratnik ramparts provides an opportunity to establish pedestrian access along the most attractive viewpoints of Sarajevo, as well as linking the buildings of Bijela tabija, kapi-kula (gate-tower), Zuta tabija, etc.

1.1. Guidelines for a strategy of renovation and development of the area

In addition to activities directed at the conservation and use of the cultural-historical heritage, it is necessary to undertake a series of parallel activities encompassing a wide variety of operations over a significantly wider area.

1.1.1. Preservation of the Sarajevo carsija (crafts/trade) zone

This implies above all a strict application of planning regulations relating to the historic heart of the city, specifically to the Sarajevo -ar{ija zone, and urgently to bring them into line with current needs.

1.1.2. Reaffirmation of the Sarajevo mahalas (residential communities) as attractive Bosnian residential zones

It is essential to support the formal protection of the Sarajevo mahalas, above all by adequate documentation that will dictate a programme for the survival of these exclusive Bosnian residential areas in conditions of modern living requirements.

1.1.3. Bentbasa recreation zone - zone of protection of the natural habitat

Although no construction of solid and permanent buildings, with the exception of those intended for everyday recreational activities, is permitted in Bentbasa, a zone of protection of the natural habitat, the zone also offers considerable tourist potential, with both indirect and direct commercial benefit, minimally within the scope of the sustainable development of this zone.

1.1.4. Vratnik ramparts

The proposed building operations involve the complete repair, reconstruction, restoration and renewal of the Vratnik ramparts as a monument of cultural-historical heritage, with parallel operations on the kapi-kula and tabija monuments.

1.1.5. Vratnik residential area

The Vratnik residential area has, with time, almost completely lost its authenticity and reminiscence of the old Vratnik town, which in certain areas has even partly lost its old street network or where individual buildings are barely surviving.

In the coming planning period it is essential to ensure the application of the Regulatory plan for the Vratnik residential area, with potential for alterations and additions only within restricted zones, if required by current living conditions or for essential improvements to the economic circumstances of the area.

1.1.6. Programmed planned development of activities compatible with tourism and ancillary activities

Each of the listed segments of parallel development of the area aimed at the development of tourism offers considerable potential for the development of individual compatible and ancillary activities.

Beginning with the Ba{ar{ija zone, as part of the historic heart of the city, primarily a trade zone, it is fully justifiable to address the issue of the appeal of this zone for tourism.

The old Sarajevo crafts without doubt have great value and importance in the present day when evaluated as applied arts according to the standards of the rest of the world. It is essential, first of all, to conserve them, and then to treat them as applied arts, ensuring their survival, with intermittent work in artistic colonies, for example located in the buildings of the Vratnik ramparts.

Tourist accommodation in the zone of the Vratnik ramparts certainly cannot be resolved by large hotels such as those already appearing at the base of the ramparts. However, the provision of accommodation in small private guesthouses built according to the standards of Bosnian residential buildings, offering typical Bosnian cuisine, certainly makes sense here. This would offer visitors a very special experience, and provide host families with a sufficient income.

The potential of the Miljacka watercourse, not long since adopted in its upper course as a "fast-water canoeing" zone, has not altered today, except that there are now greater possibilities, from canoeing via public baths and sports swimming pools, organized mountaineering schools and competitions, to the formation of specific attractive eco-systems or botanical gardens.

In addition to these possibilities, catering facilities in exclusive locations, always with individual views across to the city, are indispensable for tourism, and in specific city zones, such as that of the Vratnik ramparts, without doubt represent a source of steady profit.

With the completion for the designated purposes of the work on the buildings of the Vratnik ramparts, commercializing them as part of the tourist potential of the old city, the conditions for self-supporting, sustainable development in this area would gradually be attained.

1.2. Implementation stage

1.2.1. First stage of implementation

The first phase of the first stage of implementation implies the introduction of a Programme of repair, conservation, restoration and revitalization of Bijela tabija, and the continuation of works on the monuments of the Vratnik kapi-kulas and @uta tabija, begun after the end of the war, that is the completion of works to fit the buildings for the designated purpose.

The second phase of this stage of implementation would involve constructional repair of the ramparts themselves, with carefully thought out functions so as to create a pedestrian link between the ramparts and the kula and tabija, together with other dependent elements of the ramparts.

1.2.2. Second stage of implementation

This stage of implementation would involve completion for the designated purposes and beginning operations in the areas and buildings in direct contact with the Vratnik ramparts, implying a carefully thought out



VIEW OF BIJELA TABIJA FROM THE SOUTH-WEST DIRECTION



VIEW OF BIJELA TABIJA FROM THE SOUTH DIRECTION

tourist zone, attractive both as an exclusive locality in the city and for intensive tourist consumption.

1.3. Initial activities

The idea of the Vratnik ramparts as the framework of the development of tourism in the historic zone of Sarajevo is the result, above all, of the existing conditions of building and natural cultural-historical heritage of this zone.

At the same time, an analysis of the condition of the area from the point of view of spatial components indicates two very important factors:

- ◆ the zone of the Vratnik ramparts, or the zone of the Sarajevo mahallas, as an urban-architectural structure, is a residential zone of the city that can anticipate economic development and prosperity only from activities compatible with its primary function as a residential quarter.
- ◆ the conservation of the historic heart of the city, in the sense of its "survival" in the context of the traffic needs of a city of the size of Sarajevo, is insoluble unless functions and activities are implemented in a planned and programmatic manner such as to enable not only its survival, but the effective development of the area, on a human scale and aimed primarily at recreation and tourism.

All the above possibilities must be researched with appropriate programmes and accompanying feasibility studies, with the necessary parallel evaluation of all impact factors and their relevance to a single level - overall development, the overall impact on the entire area as a whole, for which the Vratnik ramparts are merely the framework.



OUTER WALL OF TABIJA- NORTHERN FACADE



OUTER WALL OF TABIJA- NORTHERN FACADE



NORTHERN FACADE



OUTER WALL - WESTERN FACADE



DEVASTATION OF THE TABIJA'S WALL



THE MAIN ENTRANCE, SOUTH-WESTERN FACADE



FORTRESS INTERIOR- EASTERN PART



INTERIOR OF TABIJA- SOUTH-WESTERN PART

2. PROGRAM OF STRUCTURAL REPAIRS, PRESERVATION AND RESTORATION OF BIJELA TABIJA (THE WHITE FORTRESS)

The aim of the Program is, in the first place, the global recognizing of a planned action in all stages of realization, their optimal programming, mutual coordination, creation of concrete preconditions for the financial planning of Program, and the definition of elements relevant for making elaboration of economic valorization of a culturo/historical monument in use.

2.1. Continuation of sondage archaeological excavations

According to all relevant indices from the aspect of historical facts, to the existing material evidences and the findings obtained by sondage excavations conducted in 1991, the complex Bijela Tabija is located on the southeast edge of the medieval settlement very little researched so far. Considering that the medieval findings present the oldest and the most valuable component of the Complex, i.e. Bijela Tabija, before preparatory works on realization of Program or Project of Structural Repairs, Preservation, Restoration and Revitalization of Bijela Tabija it is necessary to start the Stage II of Sondage Archaeological Excavations in totally unsearched part of Tabija.

2.1.1. Sondage archaeological excavations at the Tabija site - Stage II

This stage should include the interior of unsearched space of Tabija. Making of Research Program that would determine volume, proceedings, protective measures, dynamics of work, making of Elaboration, budget and its distribution in the complete operation precedes to the Stage II.

2.1.2. Elaboration of archaeological excavations results in the Tabija site - Stage II

Making of Elaboration of archaeological excavation results in the Tabija site - Stage II presents the final stage of archaeological excavations. Elaboration is to be coordinated with Elaboration - Stage II and to give instructions regarding Protective Measures and Program of Systematic Archaeological Excavations for the Bijela Tabija and for complete area of the ancient city Vratnik.

2.1.3. Making of Protection Measures and Program of Systematic Archaeological Excavations

At the previous experiences have shown the area of ancient city Vratnik, specially the Ramparts of Vratnik with objects Kapi-kula (towers), Zuta

(yellow) and Bijela (white) Tabija, in spite of the formal protection of cultural-historical heritage have been exposed to the constant devastation, caused to a great extent by illegal housing.

Regarding this it is indispensable to take measures for protection of Vratnik area. That would provide a system of radical actions to eliminate all devastation caused by illegal housing. These measures should be taken not only by Old City Municipality but also by Cantonal Government. Program of Systematic Archaeological Excavations should be mainly carried out in the area of Vratnik's Ramparts then in the accessible segments inside the ramparts, actually inside ancient city Vratnik.

2.2. Graphic analysis of the condition - of the complex

For the purpose of making the Project of Structural Repairs, Preservation, Restoration and Revitalization of Bijela Tabija it is necessary to procure prompt and detailed geodesic documentation.

2.2.1. Geodesic and photogrammetric recording of Complex Bijela Tabija

Geodesic and photogrammetric recording of accessible segments of the Object is the basic condition for making, in the first place, the Project of structural repairs and partial reconstruction of Bijela Tabija. It is necessary to supplement these recordings with technical architectonic recordings, especially in due to segments position on Tabija walls.

2.2.2. Graphic recording of devastation and damages

On the prepared geodesic, photogrammetric and architectonic documentation it is necessary to record all actual damages, devastation, applied materials and with the help of specialists in the field of construction define the endangered places of construction in order to take adequate measures for protection, security and disassembling of the parts of Object (in order to make structural repairs).

2.3. Examination of structure stability of object

2.3.1. Examination of static stability of Object / Objects

Considering that for a long lasting period Bijela Tabija has been exposed to permanent decaying and devastation, that parts of stone walls have been falling down endangering a large space of locality, especially the traffic road (southwest hillside of locality), it is necessary before beginning of any work on Object, on the basis of documentation, observation and sondage excavations on the locality, to check static stability of the Object.

2.3.2. Making of the Project for Protection of Objects and People in procedure of cleaning and disassembling of damaged parts of objects

On the basis of preliminary verification it is necessary to make the Projects of Objects and People Protection that should include, beside by rules provided security measures of objects and people working on construction site, special protective measures, too.

Project should also include procedures of disassembling some particular structure elements both from the aspect of security and the aspect of procedure for marking and laying down the authentic building material.

2.3.3. Definition of the elements of static calculus relevant in the making the Project of Structural Repairs, Restoration and Revitalization of Bijela Tabija

The most important segment of Projects of Structural Repairs, Preservation, Restoration and Revitalization - Bijela Tabija is Static Calculus of existing construction as well as static calculus of construction that will be partly reconstructed, with elements of structure links of the existing and the new parts of object then the possible application of contemporary solutions and materials in the Project's part related to the revitalization and establishment of the new purpose of Object.



VIEW OF BIJELA TABIJA FROM THE NORTH-WEST DIRECTION

2.4. Project of preparatory works

Preparatory works in realization of Project of Structural Repairs, Preservation, Restoration and Revitalization include mainly following works:

- ◆ cleaning of Object
- ◆ works on disassembling of unstable and endangered parts of Object
- ◆ putting the Object into the preparatory condition for carrying out structural repair works

Because of extremely bad condition of Object's structure in some segments, it is necessary to carry out all cited work in accordance with previously prepared Project for Protection of Objects and People at Object Bijela Tabija, and the Preliminary calculation and Preliminary costs of work which will be the component part Project of Preparatory Works.

2.4.1. Cleaning works

Cleaning works should include:

- ◆ cleaning and driving away the waste material
- ◆ taking apart, cleaning and driving away destroyed parts of concrete and steel structure and in accordance with the Project for Protection of Objects and People of Object Bijela Tabija
- ◆ manual digging of earth, loading and driving away (removing of earth deposits and refuse from interior plateau of Tabija)

2.4.2. Works of disassembling of unstable and endangered parts of Object

This stage of preparation include the following works:

- ◆ taking apart, marking, sorting out and depositing of material removed from unstable parts of construction
- ◆ preparation of disassembled material and structure elements for future building
- ◆ all works are carried out in accordance with the Project for Protection of Objects and People -Bijela Tabija

2.4.3. Putting the Object into preparatory condition in order to carry out works of structural repairs

This stage includes:

- ◆ fencing the Complex of Bijela Tabija in
- ◆ finishing works and preparation of the locality for beginning of sondage archaeological excavations, i.e. for beginning of structural repairs

2.5. Realization of the project for structural repairs, preservation, restoration and revitalization of Bijela Tabija

2.5.1. Stage I - Structural repairs of Object

This stage includes pure structural repairs, mainly from the standpoint of structure stabilization of Object.

Base for works of structural repairs of Object is as follows:

- ◆ Project of Architectural-engineering repairs of Object
- ◆ Project of Structure Consolidation of Object

2.5.2. Stage II - Partial reconstruction, restoration and revitalization of Object

Stage II of the operation is totally developed in accordance with the Project of Structural Repairs, Preservation, Restoration and Revitalization of Bijela Tabija.

This stage of work on the Object has intention of implementing all relevant building and other actions that are the precondition for bringing the Object to its final purpose.

2.5.3. Stage III - Bringing the Object to its planned purpose

Bringing the Object to its planned purpose is to be completely carry out according to the part of technical documentation, which is the segment of the Project Bijela Tabija that works out the final shape with details of interior and exterior final arrangement of Object, in other words the objects inside the complex Bijela Tabija.

SEGMENTS FROM:

1. PROJECT TASKS FOR DRAWING UP PROJECT OF REPAIR, CONSERVATION, RESTORATION AND RENOVATION OF BIJELA TABIJA

1.1. Construction and materials

All operations of repair, reconstruction, restoration and conservation of buildings will be carried out, as a rule, using authentic materials and construction methods.

The repair and partial reconstruction of buildings with existing materials (those already in situ) will be carried out on the basis of existing construction systems and using existing materials. In certain sections, where there is a need for additional constructive stabilization of the building, new building materials will be permitted, treated as a concealed construction element.

The repair and partial reconstruction of buildings using new materials will be carried out by using new materials (mainly stone, grouting and binding compounds) that are appropriate, by type, form and basic physical characteristics, to the existing materials. Parts of the construction carried out using new materials will be differentiated from the original parts of the construction.

Partial reconstruction of elements with no historiographic value (for example, prison cells within the bastion) may be carried out with new, modern materials and the use of modern construction systems.

All new elements introduced into the interior of the complex, of which the primary function is to make the building suitable for its designated purpose, will be treated wholly with modern materials and the use of modern construction systems.

1.2. Designated buildings - functional units

Within the context of the decision to transform Bijela tabija into a building forming an active part of the cultural life of the city, in planning the specific purposes which each building or part of a single functional unit is intended to fulfil, it is essential to ensure space for the following functional units:

◆ Open-air summer stage with space for auditorium and ancillary premises

The open-air stage should be a polyvalent space suitable for different forms of theatrical performances - drama, ballet, opera, philharmonia -

with space for auditorium within the maximum possible area of the building.

Given the climatic conditions, it will be necessary to consider all options for providing covered space, both of the stage and of the auditorium. The proposed system must be flexible in setting-up and taking-down. Ancillary premises of wardrobe and temporary accommodation of technical equipment should be reduced to a minimum.

◆ Covered space within the bastion

Existing elements of construction within the bastion to be used for the purpose of providing covered spaces usable in winter for small exhibitions and promotional activities, while during the summer period they would serve in part as premises for the daily storing of exhibits being shown in the open-air areas of the bastion.

◆ Catering, trade and tourism

The catering, trade and tourism components to be treated as separate spatial-functional units in relation to the bastion itself. Consider the reconstruction of the building on the south-west plateau below Bijela tabija, together with part of the premises to the north-west (approach) plateau of the tabija.

It is necessary to provide for the following components:

◆ catering capacity up to 200 seats

◆ trade and tourism to be treated solely as services to publicizing the cultural-historical and natural heritage of Sarajevo, via sale of souvenirs, literature, organization of sales exhibitions, guided tours of the city, etc.

1.3. Components of the building

It will be necessary to provide the Bijela tabija complex with the following components, in conformity with the designated and planned functional units:

◆ open-air summer stage with space for auditorium and ancillary premises

◆ open-air exhibition area with ancillary covered premises

◆ covered exhibition and promotional area

◆ catering facilities

◆ open-air and covered trade and tourist premises

1.4. Installation

1.4.1. Exterior installations

All exterior installations, such as mains water from the communal infrastructure, to be treated within the framework of the Regulatory plan for Vratnik.

Given the location of the Bijela tabija complex in relation to the historic heart of the city, and its visibility from different viewpoints at different altitudes of the Sarajevo amphitheatre on the one hand and the Miljacka river-course on the other, special consideration must be given to the project of lighting of Bijela tabija.

In the public lighting system it will be necessary to carry out gradations of lighting in the direct contact zone of the locality, and to treat public lighting as a means of indicating access to the premises.

1.4.2. Interior installations

These must include:

- ◆ high and low voltage electricity supply
- ◆ water supply and drainage
- ◆ gas and heating

The projects for the installation networks will be carried out on the basis of the Project of repair, conservation, reconstruction and revitalization of Bijela tabija, adapted in each case to the demands of the Project.

2. PHASE OF DEVELOPMENT OF PROJECT DOCUMENTATION

The development of the Project of repair, conservation, restoration and revitalization of Bijela tabija is planned to take place in two stages:

◆ Phase I:

Development of project of construction repair and partial conservation of the Bijela tabija complex.

This phase will also comprise the development of:

- ◆ exterior installation project
- ◆ surveyor's plan of the Bijela tabija complex
- ◆ traffic project - traffic access, transport stops, pedestrian access
- ◆ project of exterior infrastructural network
- ◆ horticultural project

◆ Phase II:

Development of conservation, restoration and revitalization project for Bijela tabija

This phase will comprise, in addition to the primary architectural-construction project, the development of:

- ◆ project of fitting and equipping interior premises of the bastion
- ◆ project for interiors of covered premises
- ◆ project of internal installations:
 - ◆ high and low voltage electricity supply
 - ◆ water supply and drainage
 - ◆ heating

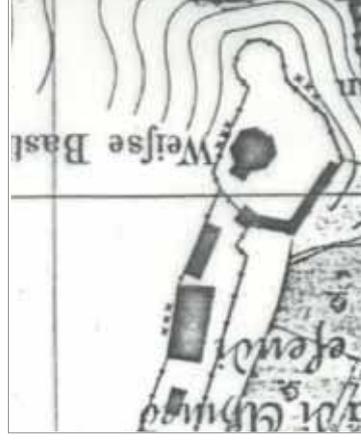
Graphical Enclosures

FROM THE PROJECT OF
URGENT STABILIZATION
AND PREPARATORY WORKS

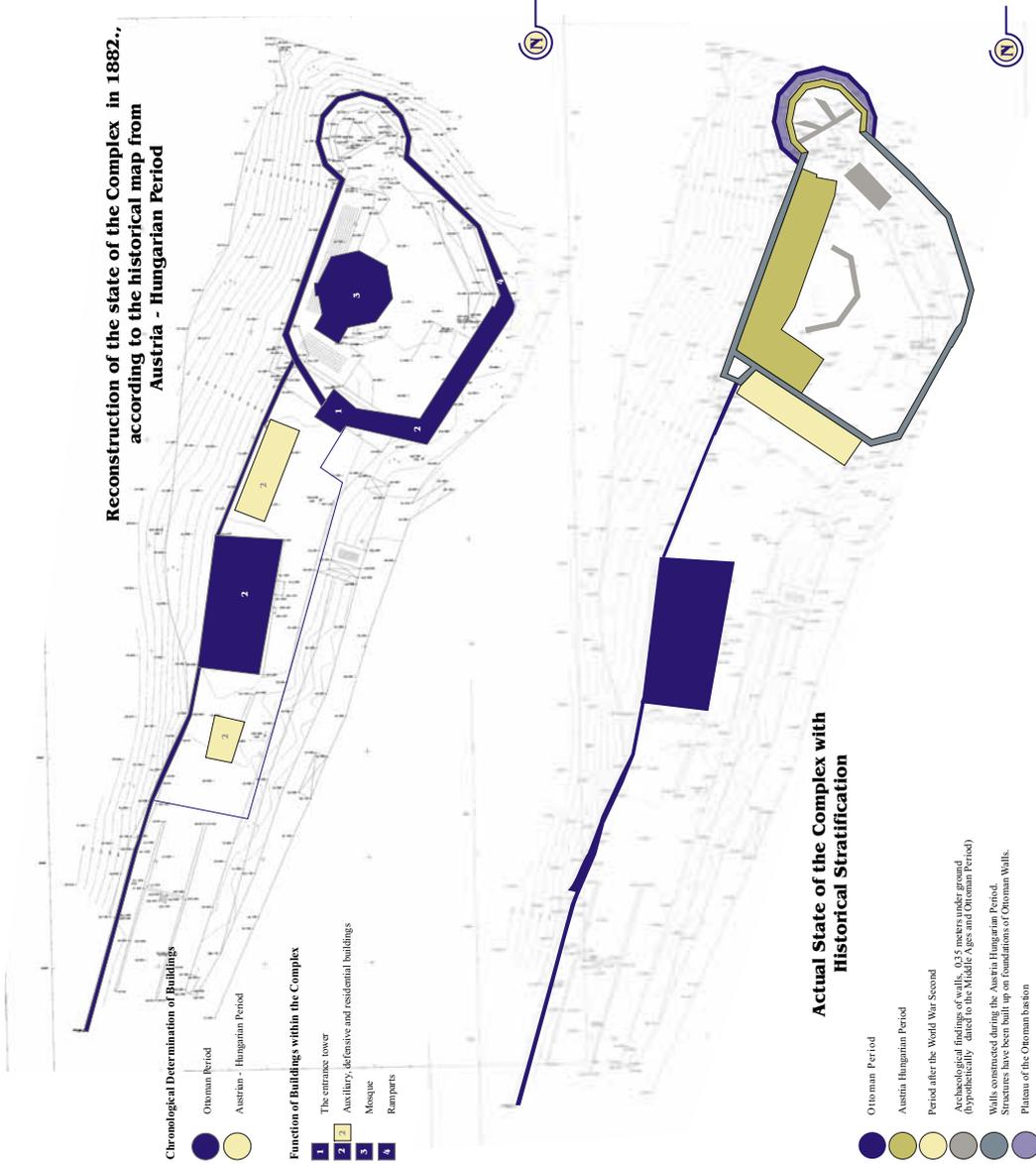
VRATNIK CITY
Historical Record from 1879.



WHITE BASTION
Historical Record from 1882.
(Period of Austria - Hungarian rule)



HISTORICAL REVIEW



INSTITUTE FOR THE PROTECTION OF CULTURAL AND HISTORICAL ANTIQUITIES		CITY OF SARAJEVO	
INSTITUTION	INSTITUTION TYPE	PERSON RESPONSIBLE	DATE OF THE STUDY
INSTITUTE FOR THE PROTECTION OF CULTURAL AND HISTORICAL ANTIQUITIES	RESEARCH	DR. ZORAN STANIĆ	2023
PROJECT	RESEARCH AND PROTECTION OF THE HISTORICAL MONUMENTS OF THE WHITE BASTION	DR. ZORAN STANIĆ	2023
TOPIC	RESEARCH AND PROTECTION OF THE HISTORICAL MONUMENTS OF THE WHITE BASTION	DR. ZORAN STANIĆ	2023
PROJECT	RESEARCH AND PROTECTION OF THE HISTORICAL MONUMENTS OF THE WHITE BASTION	DR. ZORAN STANIĆ	2023
DATE	2023	DR. ZORAN STANIĆ	2023
PROJECT	RESEARCH AND PROTECTION OF THE HISTORICAL MONUMENTS OF THE WHITE BASTION	DR. ZORAN STANIĆ	2023
DATE	2023	DR. ZORAN STANIĆ	2023
PROJECT	RESEARCH AND PROTECTION OF THE HISTORICAL MONUMENTS OF THE WHITE BASTION	DR. ZORAN STANIĆ	2023
DATE	2023	DR. ZORAN STANIĆ	2023

Building "2" - Bastion
 Inner Facades - West and North, fields: A', B', C'
 Works to be carried out
 Scale 1:100



Building "2" - Bastion
 Inner Facades - West and North, fields: A', B', C'
 State of construction after the Primary Stabilization
 Scale 1:100



**WORKS TO BE CARRIED OUT AND STATE OF CONSTRUCTION
 AFTER PRIMARY STABILIZATION
 Building 2 - Bastion
 Inner Facades - West and North, fields: A', B', C'**

DESCRIPTION

Description of works to be carried out

- Demanting and removing the unstable parts of the wall as stacking of usable stone fragments within the complex
- Partial removing of the wall and concrete flat roof construction as diving it away to the soil heap
- Walling - up of holes and damaged parts
- Reparation by the special glue for stone (epoxy resin glue) and surface protection
- Walls cleaning (washing)
- Consolidating of the wall surface as preservative treatment from water penetration

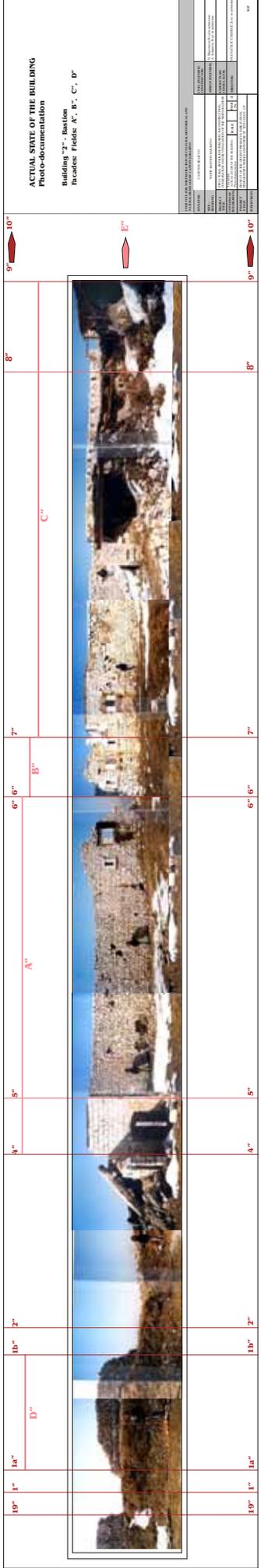


State of construction after the primary stabilization

- Repaired walls
- Protective net, set on frame / construction, according to documentation from the Structural Design
- Crown of the wall, worked out by water - proof mortar as interception coat
- Tie - beams, as defined in documentation of the Structural Design



INVESTOR		CANTON SOLOTHURN	
PROJECT		REPAIR AND RESTORATION OF BUILDING "2" - BASTION	
DESIGNER		WHITFIELD PARTNERS	
CONTRACTOR		STREIBER & CO. AG	
DATE		15.03.2023	
SCALE		1:100	
DRAWN BY		M. B. / S. B.	
CHECKED BY		M. B. / S. B.	
APPROVED BY		M. B. / S. B.	
PROJECT NO.		2023-01	
DRAWING NO.		01	
DATE OF ISSUE		15.03.2023	
DATE OF REVISION			
REVISION			
PROJECT NO.		2023-01	
DRAWING NO.		01	
DATE OF ISSUE		15.03.2023	
DATE OF REVISION			
REVISION			



ACTION STATE OF THE BUILDING
Photo-documentation

Building: 37 - Bastion
 Headed Fields: A', B', C', D', E'

GENERAL INFORMATION		PROJECT INFORMATION	
PROJECT NAME	37 - Bastion	PROJECT NUMBER	37 - Bastion
CLIENT	UNIVERSITY OF CALIFORNIA, BERKELEY	DATE OF PHOTOGRAPHY	10/11/2011
PROJECT LOCATION	UNIVERSITY OF CALIFORNIA, BERKELEY	PHOTOGRAPHER	UNIVERSITY OF CALIFORNIA, BERKELEY
PROJECT DESCRIPTION	37 - Bastion	PHOTOGRAPHY TYPE	PHOTOGRAPHY
PROJECT STATUS	37 - Bastion	PHOTOGRAPHY DATE	10/11/2011
PROJECT CONTACT	UNIVERSITY OF CALIFORNIA, BERKELEY	PHOTOGRAPHY TIME	10/11/2011
PROJECT ADDRESS	UNIVERSITY OF CALIFORNIA, BERKELEY	PHOTOGRAPHY PLACE	UNIVERSITY OF CALIFORNIA, BERKELEY
PROJECT PHONE	UNIVERSITY OF CALIFORNIA, BERKELEY	PHOTOGRAPHY WEATHER	UNIVERSITY OF CALIFORNIA, BERKELEY
PROJECT FAX	UNIVERSITY OF CALIFORNIA, BERKELEY	PHOTOGRAPHY COMMENTS	UNIVERSITY OF CALIFORNIA, BERKELEY